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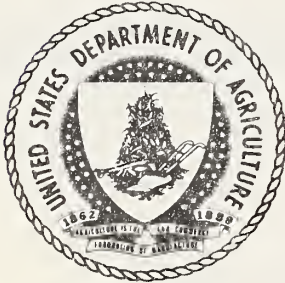
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ISSUANCES

of the

Meat and Poultry Inspection Program

March 1979



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UNITED STATES DEPARTMENT OF AGRICULTURE
Food Safety and Quality Service
Meat and Poultry Inspection Program
Washington, D.C. 20250



UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND QUALITY SERVICE
MEAT AND POULTRY INSPECTION PROGRAM
WASHINGTON, D.C. 20250

Meat and Poultry Inspection Manual

March 1979

CHANGE: 79-3

MAINTENANCE INSTRUCTIONS

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MPI Bulletins Deleted

Changes on page 111 delete MPI Bulletin 75-99.

March 20, 1979

(e) Fingernails

Persons handling exposed product shall keep their fingernails clean and neatly trimmed. Fingernail polish is not permitted.

8.18 NONFOOD HANDLER

All reasonable precautions shall be taken to prevent product contamination by visitors, maintenance personnel, and others.

Employees' traffic patterns that may result in product contamination should be eliminated.

WATER SUPPLY
Subpart 8-D

(Regs: M-308; P-Subpart H)

Plant water must be from an approved source, properly stored and distributed, and certified by local health agency. Nonpotable water may be used only as specified by regulations.

8.21 SOURCE**(a) Public**

Water from an approved supply is generally acceptable as delivered to a plant; however, it may get contaminated during plant distribution.

(b) Private

Private wells must be on premises, and must be completely protected from contamination by surface water, drainage from septic tanks, livestock pens, etc. Ground water must percolate through at least 10 feet of soil before entering the well.

8.22 CHLORINATION**(a) Chlorinators**

When chlorination is required to approve a private water supply, automatic chlorinators with devices indicating malfunctions must be used.

(b) Chlorine Test

Plant management is responsible for providing chlorine-testing kits, and for testing the water at least weekly to determine whether chlorine levels are as specified by State health agency.

(c) Chlorinated Water Sprays

They may be used intermittently on carcasses while being chilled and for bacteriostatic purposes, provided the procedure is approved by TS. Enough data should be submitted showing that the proposed method (1) has beneficial results, (2) does not cause insanitary conditions--rust, condensation, etc.--and (3) plant's control assures no weight gain for any carcass.

After approval, TS will devise a procedure to monitor the plant's control program.

Also as part of the control program each plant must provide at least five aerobic plate count determinations per month both before and after spraying. In addition, five semiannual determinations for the coliform group, coagulase positive staphylococci and salmonellae both before and after spraying must be provided. Microbiological determinations shall be obtained by a suitable swab-dilution technique or equivalent procedure and the surface area examined shall be at least 4 square inches. All results submitted shall be provided in terms of bacteria per square inch except for salmonella determinations which may be reported as "present" or "absent." The inspector will maintain them in his official file for further analysis as directed by TS. Purpose of above microbiological counts is to establish a record of continued efficacy. Upon

a showing of undue hardship, plants with limited volume may propose, for evaluation by MPI, alternate means of establishing efficacy.

8.23 NONPOTABLE WATER

Untreated water from a river, lake, or unapproved well is considered non-potable and, if used, shall meet all regulation requirements.

Contamination Hazards. Where non-potable water is permitted, it must be used with adequate safeguards to prevent contact with edible products or potable water. Dead-end pipelines and improper cross connections of potable and nonpotable water lines shall be eliminated.

8.24 ICE

Water for ice making purposes must be potable. Ice producing, storing and handling equipment must be inspected for sanitary conditions.

Ice carried out of a poultry chiller with product may be replaced into the chilling system, provided it is collected and handled in a sanitary manner acceptable to the inspector in charge, and the ice is reused within the same day. If its cleanliness is questionable, it shall be rejected. Ice shall not be reused for chilling poultry product during further processing.

Since ice bag surfaces may become contaminated during handling, ice bags should not be placed over chill vats for emptying, unless the outer layer is removed.

Water and Ice Storage. It must be on the premises, and must be adequately protected from contamination.

Ice making or storing facilities (storage bins, etc.) should be lined with stainless steel or rust-resistant material. The metal should be of sufficient thickness to withstand repeated striking of a shovel without puncturing. Suitable perforated, rust-

resistant, and removable metal drainage plates should be provided at the bottom of the ice storage compartment, and frequently inspected to assure cleanliness. In some equipment used for producing flaked ice, water resulting from melted ice collects in a space below the ice storage compartment. This water should not be used in producing ice, nor in potable water lines or supply. It may be used to prechill water circulated in closed coils.

8.25 REUSE OF WATER

It must comply with the regulations. Complete drainage and disposal of reused water, effective equipment cleaning, and reused water renewal with fresh potable water must be done frequently enough to assure an acceptable water supply for intended purpose.

(a) Chilling Unit Water

Overflow water from poultry chilling units may be used to move heavy solids in eviscerating troughs, but not to flush the trough's sides. After screening out visible solids, it may also be used in scald tanks, wax-hardening operations, feather flow-aways, picker aprons, and for washing picking room floors.

(b) Water from Condensor or Compressor

It may be used as stated above if the system is closed and back-siphonage is prevented, or where artificially heated water is permitted, provided its potability is certified by a local or State health agency.

8.26 BACK-SIPHONAGE

Contaminated or polluted water may enter a water supply system when negative pressure develops. This can be prevented by eliminating submerged water lines or by using functional vacuum breakers between the last cut-off valve and the submerged line.

carcass or parts cannot be accomplished, or interferes with proper carcass disposition judgment, the entire carcass shall be condemned.

c. If a. and/or b. does not apply, carcasses or parts of carcasses shall be passed for food after complete removal and condemnation of all affected tissues and exudate.

(2) Salvage of portions.

a. Poultry portions may be salvaged provided the operation, approved by the circuit supervisor, is done sanitarily with continuous product flow and without pileup or delay.

b. Salvaged portions are chilled immediately with ice in continuous drained tanks.

The inspector in charge shall assure that all requirements of this section are met. Plant failure to comply with such requirements will result in discontinuing salvage operations.

(v) Leukosis

Since gross lesions of leukosis are evidence of systemic disturbance, affected carcasses shall be condemned.

Gross lesions may appear in one or more tissues. However, organ enlargement may not necessarily be evidence of leukosis.

(1) **Inspector's authority.** Line inspectors are trained to recognize leukosis lesions and, under veterinarian's supervision, they are permitted to condemn carcasses affected with such lesions. However, they shall retain any questionable carcass for veterinarian's disposition.

(2) **Affected organs, tissues.** Leukosis lesions vary in size, shape, location, color, etc. Following are the most common lesions, organs, or tissues involved.

- (i) Liver, spleen, kidney, lung, pancreas, intestine, heart, gizzard, proventriculus, (stomach).

Whitish gray (lymphoid tissue) masses, fairly uniform and oval, single or multiple, occurring in one or more organs. Lesions may vary in size up to an inch or more and may involve the entire organ or be imbedded in the
* organ requiring palpation for detection.

One lesion smaller than one millimeter in size cannot be positively identified as leukosis. When such a lesion is observed, other evidence should be present for condemnation.

Liver lesions may be spread throughout the organ causing size increase and change in texture and color. In this case individual tumors may not be noticeable.

(ii) Ovary. Ovaries appear cauliflower-like, with thickened folds and reduced granular appearance. They are moderately to greatly enlarged and easily broken apart.

(iii) Testicle. Testicles may appear as solid tumors, enlarged, irregularly shaped, and lumpy with whitish gray lesions.

(iv) Muscle. Lesions may appear as solid tumors, or they may be mushy when necrotic. They may show a yellowish or grayish discoloration.

(v) Skin. Skin leukosis appears as enlargement of feather follicles, common on legs, breast or neck, but it may be on entire body. These nodules may be pearly, yellowish, or grayish.

When carcass cuticle is removed with hard (hot) scald or barking, color contrast of nodule is increased. When scattered follicles are affected, feather tract pattern appears disrupted mostly on legs.

Lesions may vary in size. They may be extensive, coalesce, and become ulcerous.

Reddening of follicles alone should not be confused with leukosis.

(vi) Nerve. The nerve is enlarged, misshaped, and discolored with loss of cross striations. One or more nerves and ganglia may be affected in varying degrees.

(vii) Osteopetrosis. Long bones are usually involved which show general enlargement of bone shaft. Bone thickening may be so extensive to fill in the marrow cavity. In advanced cases, this brittle bone will break smoothly instead of roughly as in normal bone.

(w) Ornithosis

Lesions of ornithosis are not pathognomonic nor constant. Positive diagnosis may be done by laboratory only. The following gross lesions may be observed:

PART 17

LABELING

LABEL APPROVAL; CONTROL

Subpart 17-A

(Regs: M-317, P-Subpart N,P,T)

17.1 APPROVAL

(a) Responsibility

All labels must be approved before use. Plant management is responsible for accuracy of labels used with products.

The inspector should review all labels, indicate his acceptance, and submit them to the inspector in charge for his concurrence and/or approval.

* Inspector in charge may contact MP SL through his supervisor for advice on labels offered for his approval.

(b) Application

MP Form 480 is completed by the establishment and submitted with proposed labels to:

* Meat and Poultry Standards and
* Labeling Staff
Benjamin Franklin Station
Post Office Box 7416
Washington, D.C. 20044

The word "labels" should be placed next to the address on the envelope.

(c) Product Samples

Product samples submitted with proposed labels should be addressed to:

* Meat and Poultry Standards and
* Labeling Staff
* Compliance, FSQS, USDA
12th and C Streets, SW.
Agriculture Annex Building
Washington, D.C. 20250

Perishable samples should be packed with sufficient refrigerant to last until received. Since USDA mail rooms and local delivery services do not have refrigerated or frozen storage space to hold product over the week-end, perishable samples must be sent early in the week to assure delivery before 4:45 p.m. Friday.

(d) Sample Delivery

For all delivery services, except postal, place a note near the address on each package requesting the carrier to call 202/447-2711 for delivery instructions.

(e) Conditional Approval

When MP SL places remarks, modifications, or conditions for use on label approvals, they shall be complied with for use of the label. *

(f) Product or Postal Zip Code *

Approved labeling for meat and poultry products, to which universal product code (UPC) and/or postal zip code are added or changed, will not require Washington approval provided (1) all other labeling information shown on the original approved label is not changed nor rearranged, and (2) a copy of the new label is approved by the inspector in charge and filed with the original approval. *

17.2 CONTAINER APPROVAL

(a) Experimental Product *

MP SL may approve labels for "not for sale" product used experimentally or as samples. *

(b) Meat

Markings. Labeling may consist of a combination of printing, stenciling, box dyes, etc., for large true containers and for shipping containers.

Crayons are unacceptable for applying required labeling features except for figure indicating content quantity.

(c) Poultry

True shipping containers for poultry and poultry products may be approved by inspector in charge (381.127,134).

(1) **Review.** The inspector in charge shall review all proposed shipping container labels and shall approve those complying with regulations.

(2) **Procedure.** Establishment prepares MP Form 480 as prescribed, and submits to inspector in charge in triplicate with labeling material.

Inspector in charge marks "approved," and puts date and his signature in appropriate space on the form and on the label. When MP Form 480 is completed, one copy is returned to plant management, one copy placed in inspector's in charge file, and one sent to MPSL. Inspector in charge should attach a statement to the MPSL copy showing all wording appearing on the shipping container.

(3) **True or immediate containers.** Container labels for bulk, ice-packed poultry, outside containers for institutional packs, and consumer packages shall be sent by plant management to MPSL for approval.

For practical reasons entire boxes or parcels should not be submitted. Stripped panels, paper takeoffs or photostats will expedite handling.

(d) Display Container (Meat-Poultry)

Empty containers, bearing approved labels including official marks of inspection, may be used for display or advertising purposes without further MPSL approval.

(e) Kosher Product Containers

Containers used for hearts, livers, and other product or tissues with attached metal tags indicating kosher inspection, must be labeled "kosher

tags attached."

17.3 INEDIBLE PRODUCT; APPROVAL

Inspector in charge approves all labels not qualified to bear the official mark of inspection, including "not fit for human food" products.

17.4 INSTITUTIONAL PACK (Poultry)

(a) Box-End Label

A box-end label with all mandatory information and acceptable wording, indicating additives used and their purpose, shall be attached to each box.

(b) String Tag, Metal Clip

When bearing approved wording to indicate additive used and its purpose, the tag or clip must be attached to each piece (carcass or part) contained therein.

(c) Transparent Plastic Bag

When a product is packed in transparent plastic bags, overwrapped tray packs, etc., the special wording must be printed on each unit package or bag with other required information. Product so packed must be in containers of appropriate size to assure reaching the consumer--institution, household, etc.--in fully labeled packages.

(d) Approval

All box-end labels, string tags, wing clips, transparent bags, etc., showing above required information, shall be submitted to MPSL for approval.

17.5 CONTROL

(a) Inspector

To assure labeling compliance with regulations and approved product formulation, the inspector should require plant management to have adequate procedural control. However, such procedures must not significantly surpass normal routine controls needed to

(2) **Soy Product.** The inspector must assure that they are properly used. Approval of soy flour, soy protein concentrate, and isolated soy protein as ingredients of sausage is based upon their binding properties. These substances are also permitted as ingredients of other meat food products--chili, stew, loaves (other than meat loaves), soups, etc.

Soy products with appearance of diced, flaked, or ground meat, even though labeled as "soy flour," "isolated soy protein," and "soy protein concentrate" should not be used in meat food product unless specifically
 * approved by MPSL. This Staff will approve labels for emulsified cooked sausages containing textured or structured soy flour, isolated soy protein, and soy protein concentrate, provided the textured or structured products are finely divided as a part of the emulsifying process. When so used, the labeling declaration of the soy products should not show the words "textured" or "structured."

In all cases, soy products must be identified by their common or usual name in the ingredients statement and/or by byproduct name, as required by regulations or label approval. Soy bean derivatives for which the category or protein content is questionable should be submitted to the laboratory. Soy protein concentrate, soy flour, and isolated soy protein are practically indistinguishable by visual examination. They may also closely resemble sodium caseinate, nonfat dry milk, and certain cereals. Therefore, if a plant stocks more than one type of soy product, additional controls are required. These include developing, with the plant, a procedure for confining soy products for positive identification and maintaining daily records showing amounts of soy bean derivative used and type of product prepared.

(b) Formula Control

Approved label formulas must be

controlled at plant level. Since all products cannot be verified by laboratory analysis, the inspector should check the weight, calculate the percentage of ingredients, and assure that product is properly formulated.

The inspector should also check plant records of ingredients and assure that amounts used correspond to product produced.

(c) Confidential Formula

Ingredients with confidential formulas (spice mixtures, seasonings, etc.) may be used in products, provided they are specifically identified in the label approval. Confidential formulas are reviewed for acceptability, and label's ingredient statement verified for accuracy. The inspector's responsibility limits use of such materials to identified brands in specified amounts. Substitutions are not permitted without approval.

Exception! Certain materials--mayonnaise, ketchup, bakery products, cheese, margarine, etc.--have an official standard of identity (or composition) registered with FDA. When used in products, a confidential formula for each is unnecessary for label approval. Different brand name products may be interchanged without MPSL clearance. However, substituted
 * product must carry the same product name--mayonnaise, ketchup, etc.

(d) Material Rejection

Nonfood ingredients rejected for use may be removed from the plant or destroyed at the plant. If removed, FDA
 * and local health authorities should be notified.

SAUSAGE (MEAT)

Subpart 18-E

(Regs: M-318, 319)

18.23 FRESH PORK SAUSAGE

Sampling, Compliance

When surveillance is limited, submit occasional samples to laboratory. Take corrective action when percent water in sample exceeds limits in Table 18.1A.

Table 18.1-A -- Percent of Allowable Water ^{1/}

Product Formula	Maximum Individual Sample Result	Maximum of three Consecutive results
Water	5	3
No Water	2	0

^{1/} Allowances for water are because of analytical variations and the method of calculating added water in sausage.

If product is suspected of excess added water, submit two samples from different parts of the lot. Retain if the average is: Four percent or more if water is declared; or 1 percent or more if no water is declared.

18.24 COOKED SAUSAGE

This section covers cooked sausages subject to fat and/or added water limitations.

(a) Casings

(1) Vinegar, lactic or citric acid. Their solutions may be used for acidification purposes. To improve peeling, 5 percent citric acid or 35-40 grain vinegar may be used for spraying frankfurters before or after smoking.

These solutions may be recirculated during the day's operation if they are effectively filtered and are clear. The equipment must be of approved plastic or stainless steel.

Spray heads, filters, and pumps must be capable of being dismantled for cleaning.

(2) Unapproved Substances. Animal casings (318.6(b)(2)) preflushed and packed in solutions containing unapproved substances--antibiotics, antioxidants, preservatives, nitrite, nitrate, etc.--are not permitted. When noncompliance is suspected, the inspector should submit samples of casings and solutions to the laboratory.

(3) Approved dyes. Artificial casings impregnated with soluble approved dyes may be used for small sausage varieties (318.7(c)(3)). The certification required for coal tar dyes (318.7(c)(4)) should be furnished with each lot of such dye-impregnated casings.

(4) Color penetration. Examine artificially colored product. If, within 72 hours after stuffing, product shows color penetration, retain for appropriate disposition. Do not ask laboratory to examine product for color penetration.

(5) Rework. This term applies to a fully or partially processed product (not including uncooked trimmings) re-routed for reasons other than unwholesomeness or adulteration (i.e., emulsion residue, product breakage, slicing operations, smoked meats, returns, etc.) and intended for inclusion in cooked sausages, loaves, and similar products. Rework may be used provided it does not adulterate the product, violate its standard of composition, upset the order of predominance of ingredients, or perceptively affect the normal characteristics of the product, and is subject to the following restrictions:

a. Cooked sausage, meat loaves, may be used in similar products



UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND QUALITY SERVICE
MEAT AND POULTRY INSPECTION PROGRAM
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MEAT AND POULTRY INSPECTION REGULATIONS

MARCH 1979

CHANGE: 79-3

MAINTENANCE INSTRUCTIONS

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those up to and including the decaglycerol esters and otherwise meeting the requirements of § 121.1120(a) of the Food Additive Regulations).	standards of identity or composition.
Polysorbate 80 (polyoxyethylene (20) sorbitan monooleate).	do
Polysorbate 80 (polyoxyethylene (20) sorbitan monooleate).	Shortening for use in nonstandardized baked goods, baking mixes, icings, fillings, and toppings and in the frying of foods.
Propylene glycol mono and diesters of fats and fatty acids.	do
Propylene glycol mono and diesters of fats and fatty acids.	Rendered animal fat or a combination of such fat with vegetable fat.
Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).	do
Polysorbate 60 (polyoxyethylene (20) sorbitan monostearate).	Shortening for use in nonstandardized baked goods, baking mixes, icings, fillings, and toppings and in the frying of foods.
Stearyl-2-lactylic acid.	do
Stearyl-2-lactylic acid.	Shortening to be
	1 percent when used alone. If used with polysorbate 60 the combined total shall not exceed 1 percent.
	Sufficient for purpose.
	1 percent when used alone. If used with polysorbate 80 the combined total shall not exceed 1 percent.
	3.0 percent.

Class of substance	Substance	Purpose	Products	Amount
Flavoring agents; protectors and developers.	Stearyl monoglyceridyl citrate.	do	used for cake icings and fillings. Shortening.	Sufficient for purpose.
	Program approved artificial ₁ smoke flavoring.	To flavor prod-uct.	Various. ²	do.
	Program approved ₁ smoke flavoring.	do	do	do.
	Autolyzed yeast extract.	do	do	do.
	Harmless bacteria starters of the acidophilus type, lactic acid starter or culture of <u>Pediococcus cerevisiae</u> .	To develop flavor. To dissipate nitrite.	Dry sausage, pork roll, thuringer, lebanon bologna, cervelat, and salami. Bacon	0.5 percent. Sufficient for purpose. * *
* *	Benzoic acid, sodium benzoate.	To retard flavor reversion.	Oleomargarine	0.1 percent.
	Citric acid.	To protect flavor.	do	Sufficient for purpose.
	Flavoring.		Chili con carne.	Sufficient for purpose.

**MEAT AND POULTRY INSPECTION (MPI)
PUBLICATIONS**

Issuances of the Meat and Poultry Inspection Program. This publication is published monthly by the Regulations Coordination Division, and includes selected CFR amendments, MPI bulletins, and MPI directives; changes to the Meat and Poultry Inspection Manual; and changes to the Meat and Poultry Inspection Regulations. Subscription for 1 year (12 issues) is \$13.00 in U.S. and possessions, and \$16.25 in other countries; cost of one copy is \$1.25 in U.S. and possessions and \$1.75 in other countries.

Meat and Poultry Inspection Manual. This manual contains procedural guidelines and instructions useful in enforcing laws and regulations related to Federal meat and poultry inspection. Copy of the publication and changes since its printing: \$16.50 in U.S. and possessions, and \$20.75 in other countries.

Meat and Poultry Inspection Regulations. This publication contains regulations for slaughter and processing of livestock, poultry, as well as for certain voluntary services and humane slaughter. Copy of the publication and changes since its printing: \$30.00 in U.S. and possessions, and \$37.50 in other countries.

Meat and Poultry Inspection Directory. This directory is published semiannually. Subscription for 1 year (two issues) is \$9.25 in U.S. and possessions, and \$11.60 in other countries; cost of one copy is \$4.75 in U.S. and possessions, and \$5.95 in other countries.

List of Chemical Compounds. Lists nonfood compounds authorized for use in plants operating under USDA Meat and Poultry, Rabbit and Egg Products Inspection Programs, and the U.S. Department of Commerce, Fishery Products Inspection Program. Cost of one copy is \$4.00 in U.S. and possessions, and \$5.00 in other countries.

U.S. Inspected Meatpacking Plants; A Guide to Construction, Equipment, Layout; Agriculture Handbook No. 191. This handbook is designed to supply interpretation of regulations and guidelines in designing, building, altering, and maintaining meatpacking plants to operate under Federal inspection. Cost of one copy is \$2.90 in U.S. and possessions, and \$3.65 in other countries.

Accepted Meat and Poultry Equipment. This publication is published three times yearly, contains information on equipment construction and acceptance, and lists commercially available equipment acceptable for use in federally inspected meat and poultry plants. Subscription for 1 year (three issues) is \$5.65 in U.S. and possessions, and \$7.10 in other countries; cost of one copy is \$1.90 in U.S. and possessions, and \$2.40 in other countries.

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Correspondence on the contents should be addressed to USDA, FSQS, CP, Regulations Coordination Division, Washington, DC 20250.

Correspondence on mailing and distribution should be addressed by MPI personnel through regional director, and by State personnel through State program director and MPI regional director to USDA, FSQS, Administrative Services Division, Room 0157, South Building, Washington, DC 20250.

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